

Draft June 25, 2001

U.S. Environmental Protection Agency
Science Advisory Board
Committee: Advisory Council on Clean Air Compliance Analysis (Council)
Panel to Review the Draft Analytical Plan for EPA's Second Prospective Analysis
Public Teleconference

Summary Minutes of Public Teleconference

Date: June 22, 2001

Committee Members: (See Roster - Attachment A.)

Date and Time: 1 pm to 3 pm, June 22, 2001 (See Federal Register Notice - Attachment B).

Location: Ariel Rios North, Conference Room 6013

Purpose: The purpose of the call is to provide Council members and consultants with the opportunity to: (1) clarify the charge question related to the "analytical blueprint" for the third Section 812 Study; (2) request any supplemental materials from the Agency; (3) ask questions on materials already received from the Agency; and (4) and discuss preparations for a public meeting of the Council Meeting on Monday and Tuesday, July 9-10, 2001 in Washington, DC.

Attendees: Chair: Dr. Trudy Cameron; COUNCIL Members: Ms. Laurie Chestnut, Drs. Don Fullerton, Lawrence H. Goulder, James Hammitt, Jane Hall, Lester Lave, Paul Lioy, Paulette Middleton; Other SAB Members participating: Drs. Philip Hopke and Mort Lippman; SAB Consultants: Drs. David Chock, Panos Georgopoulos, Michael Kleinman, Tim Larson, Michael Lebowitz, James Price and George Taylor. SAB Staff: Dr. Angela Nugent, Designated Federal Official, and Ms/ Rhonda Fortson. Other Persons Attending: Mr. James DeMocker (EPA, Office of Air and Radiation); Dr. Frank Arnold (private consultant), Mr. Chris Legett (IEc); Dr. Donald McCubbin (Abt); Mr. Jim Neumann (IEc); Dr. Ellen Post (Abt); Dr. Henry Roman (IEc); Ms. Liza Ryan (IEc); Mr. Jim Wilson (Pechan Avanti); Dr. Leland Deck (Abt).

Meeting Summary:

The discussion generally followed the issues and general timing as presented in the meeting Agenda (see Meeting Agenda - Attachment C). The teleconference lasted until 3:00 pm. There were no written comments submitted to the Committee, and there was no written request to present public comments during the discussion.

Welcome and Introductions - Dr. Trudy Cameron, the Chair, opened the session at 1 a.m. welcoming members and consultants (Roster, Attachment A), and reviewed the agenda (Attachment C). Dr. Angela Nugent, Designated Federal Official (DFO) took roll.

Public Disclosure

The DFO informed listeners that the SAB has determined that this panel has no legal "conflicts of interest" with the issue being reviewed. She then asked panel members to introduce themselves and give very brief (1 minute) descriptions of how their background, experience and interests relate to the review of the 812 analytical blueprint.

Dr. Cameron prepared a written statement and commented briefly that she was a Professor of Economics at University of California, Los Angeles, where she specializes in Environmental Economics and Econometrics. She stated that she had no known conflicts.

Ms. Laurie Chestnut stated that she was an economist who has worked 20 years as consultant conducting contract research, with a speciality in the area of environmental protection, especially nonmarket health and welfare effects. Clients have been mostly public sector clients, state clients, including California. Her publications have been on topics related to health effects of particulate matter, value of statistical life. Some of her previous work has been referenced in 812 documents.

Dr. James Hammitt identified himself as an Associate Professor of Economics and Decision Sciences at Harvard School of Public Health. His research and teaching concern the development and application of risk analysis and benefit-cost analysis to environmental health risks, including air pollution, climate change and stratospheric ozone depletion.

Dr. Lester Lave stated that he was a Professor at Carnegie Mellon, where he is head of the Green Design Initiative. He has no recent publications on air pollution

Dr. Paul Liroy stated that he was Deputy Director, Exposure Measurement and Assessment Division in the Environmental and Occupational Health Sciences Institute at the Robert Wood Johnson Medical School. He works in a center for study of exposure and dose modeling. He has conducted research funded by EPA related to air pollution and received research grants from wide range of government and health, none that impacts on the committee's work. Some work his group has done has been used by previous 812 analysis and is a consultant to CASAC

Dr. Paulette Middleton stated that she was the Director of the Environmental Center at RAND. She has worked on a broad range of air quality modeling issues, including a global emissions inventory and scenarios in western states.

Dr. Jane Hall stated that she was a Professor of Economics at the California State Institute for Economic and Environmental Studies. She has just received funding from the California Air Resources Board for several research projects related to air pollution, including school absences and air pollution. She is serving on a National Academy of Sciences committee at air quality management.

Dr. Don Fullerton stated that he was Professor, Department of Economics, University of Texas. He held an EPA grant finished in 1997; he currently holds an NSF grant looking at such issues as second best models of taxation; how to design environmental policies when emissions can't be measured.

Dr. Philip Hopke, SAB member and member of the Council's Health and Ecological Effects Subcommittee (HEES) and Air Quality Modeling Subcommittee (AQMS), stated that he was Robert

A. Plane Professor, Department of Chemical Engineering, Clarkson University and was engaged in a broad range of activities related to scientific aspects of air pollution control including his role as chair of the EPA's Clean Air Scientific Advisory Committee.

Dr. Morton Lippman, SAB member and member of the Council's Health and Ecological Effects Subcommittee, stated that he was Professor at the Nelson Institute of Environmental Medicine at New York University. He has just completed work for the Royal Society of Canada on a study of benefits associated with control of particulate matter and ozone.

Dr. Panos Georgopoulos (AQMS member) stated that he was Associate Professor of Environmental and Community Medicine at the Robert Wood Johnson Medical School. He is associated with several projects funded by EPA and the Department of Energy, as well as smaller projects from private sector related to air quality modeling.

Dr. Michael Kleinman (AQMS Member) stated that he was Department of Community and Environmental Medicine at the University of California, where his research is on the health hazards of air pollutants.

Dr. Timothy Larson, (AQMS and HEES member) Professor, Department of Civil Engineering, University of Washington, identified himself as director of the Particulate Matter research program. He is conducting an assessment of atmospheric and particulate matter.

Dr. Michael Lebowitz (HEES member) stated that he was Professor of Medicine, Epidemiology and Biostatistics, College of Medicine, University of Arizona. He has grants from EPA, National Institutes of Health and others to study asthma and its relationship to air pollutants including ozone.

Dr. James Price (AQMS member) stated that he was Senior Scientist in the Texas Natural Resources Conservation Commission, where he assesses ozone and particulate matter.

Dr. George Taylor (HEES Member) stated that he was a Professor in the Biology Department at George Mason University.

Panel members agreed to provide the DFO with texts of their brief public disclosures so that Dr. Nugent could make them available at the July 9-10 public meeting.

Discussion of Charge for July 9-10 Meeting

Panel members raised no questions about the clarity or appropriateness of the general charge questions for the Panel review.

Agency Orientation to Analytical Blueprint

Mr. Jim DeMocker opened his remarks by thanking SAB members and panelists for their commitment to help the Agency with the second prospective study. He commented on the remarkable continuity of EPA staff and contract members of the project team, some who have been involved in the project for 10 years.

He thanked Dr. Paul Lioy for suggesting that the Agency develop the analytical blueprint. The draft blueprint summarizes methods used in the first prospective study and states initial plans for the second prospective study. He informed the group that the elements of the blueprint could change; proposals for analytical steps might respond to new tools available (e.g., Version 7 of REMSAD might be available in the Fall).

He pointed the panel to key issues relating to early steps in the study and asked for advice especially on options for the scope of the study as outlined in Table 10-3, page 10-8.

Panel members responded with appreciation for the design of the blueprint, as a reminder of past history developing 812 reports and for the clarity of presentation of issues.

Mr. Democker then discussed the Key Specific Questions provided to panel members, HEES and AQMS members. He recognized that reviewers may also focus on other issues in their advice to the Agency.

Discussion of Analytical Blueprint

Panel members then turned to the following questions: (1) Is the analytical blueprint clear and adequate to address the charge questions? ; and (2) Are supplemental materials needed?

Dr. Cameron asked for information prior to the July 9 and 10 meeting regarding the costs in terms of elapsed time, resources, etc. of runs necessary for options in Table 10-3. Mr. DeMocker responded that the Table already arrayed options in declining order terms of the costliness of system requirements. There is one exception: geographic disaggregation is not as costly as its placement near the top of the table may indicate. They then discussed the possibility of analyzing the Aexchange rate@ between different options. At this point Mr. DeMocker stated that trade-offs were Ahard to identify@ without assumptions about information and data sets to be used. In addition, advice from the Council to invest in certain scenarios may change the available resource pool.

Dr. Middleton then asked about overall scheduling for production of the 812 Study. Mr. DeMocker replied that there are no definitive, specific, and legally binding deadlines, other than the original statutory language specifying a two-year periodicity for this series of reports. The Agency's ambition is to continue to streamline the analytical components to meet the statutory requirements for generation of a report every two 2 years. Given that desire, the Agency plans to finalize the blueprint in early August. The Agency would then like to finalize the analysis within 12 months.

The panel then turned to the key specific questions. The purpose of the discussion was the clarity of the question and the adequacy of the materials provided for addressing it. In regard to **question 1**, whether the baseline economic scenarios should address the scope of the President=s energy plan, several members asked for clarification. Dr. Lioy suggested that Aif we are on course to introduce more coal or diesel into the mix of energies, we have to consider potential impacts there will be or potential control technologies there might be.@ Dr. Lave responded that AEPA should wait for a formal congressional request.@ In his view, the energy scenario, from an 812 perspective, was

entirely speculative; marginal benefits and costs should be focus. Dr. Middleton responded that the Agency=s assumptions regarding energy need to be addressed, but not in a full-blown analytical sense. She suggested that the Study contain a section commenting about the Agency=s basic assumption regarding energy use, so reader can understand uncertainties associated with a particular choice of baseline. Others also reflected on the merit of this approach: it preserved a capacity to address alternative energy futures and kept the focus on the mission of the 812 Study. Members stated that the Agency should use official projections on energy use, most probably from DOE. Mr. DeMocker responded that he would provide detailed description of energy assumptions before the July meeting.

Regarding **question 2**, members raised only one concern about the proposed approach for modeling uncertainty. Dr. Cameron suggested that the Agency address the issue of corrections between modeled uncertainties that are currently assumed to be random. When the Agency is generating modeled benefits and costs, it needs to consider whether variable uncertainties are correlated.

In discussing **question 3**, Dr. Lippman linked the question to Table 10-3 and suggested that uncertainties were not major for air toxics. Instead he suggested that if the Agency uses conservative upper-bound estimates, that the risk is negligible or *de minimis*. He also suggested that there was sufficient information to characterize some noncancer effects. Mr. DeMocker emphasized the importance of this issue to the planned disaggregation of results, particularly with respect to potential interpretations of the resulting incremental estimated benefits and costs of Title III. Dr. Kleinman enquired if the Agency had learned of a useful approach from the experience with the draft National Air Toxic Assessment (NATA). Mr. DeMocker agreed to consult with Agency staff working with NATA on this question and report back.

Mr. DeMocker provided some context for **question 4**. Option 1 would provide a dynamic approach that would estimate how the effects of overlapping programs enacted pursuant to other titles would adjust to the elimination of the target title, citing the example of how the estimated outcomes for Title I "Rate of Progress" requirements might change if VOC reductions achieved under Title III are eliminated. Mr. DeMocker expressed concern that projections of such compensating responses would occur at the margin (e.g., the Title I ROP requirements) and that their particular uncertainty may confound or distort the apparent incremental effects of the target title (e.g., Title III). Option 2 would use a static approach. He also stated that the title-by-title scenario was one of the most costly to implement since at four full model system runs would be required to individually eliminate Titles I, II, III, and IV.

In regard to **question 5**, members asked for maps showing regions being considered for regional-level disaggregation of costs. Mr. DeMocker agreed to provide them.

In discussing **question 6**, the panel asked for no additional clarification or information.

In regard to **question 7**, Dr. Fullerton asked for confirmation that the CGE model was to be used to estimate indirect effects, but not changes in growth. Mr. Democker confirmed that growth differentials were not planned to be fed back into the system. He agreed to provide information about

costs of Afeeding growth differentials back into the system,@ and also to provide relevant citations about the CGE Model from the retrospective study.

In discussing **question 8**, Dr. Taylor asked for clarification on how ecological resource flows will be addressed in the analysis.

In discussing **question 9-11**, Council members requested description, including development status, peer review history and description of changes from previous version, documentation and/or the code for REMSAD Versions 6 and 7. Mr. DeMocker agreed to provide this material for their review in advance of the AQMS teleconference call on July 2.

In discussing **question 12**, the panel asked for no additional clarification or information.

Council Schedule/Process for Review

The DFO and the Chair discussed responsibilities for preparing written material for the July 9-10 meeting. No issues were identified with the process or schedule.

The DFO and the Chair asked members to register for the SAB discussion database to expedite completion of the Panel report.

Discussion of Draft Agenda for July 9-10, 2000 Meeting

The DFO and the Chair discussed the draft agenda for the July 9-10 meeting. No issues were identified.

Action items:

1. Panel members to provide the DFO texts of their brief public disclosures so that Dr.Nugent could make them available at the July 9-10 public meeting. (Due date: June 29)
2. Panel members to inform the DFO of their preferences for receiving electronic materials (e.g., SAB Internet Discussion Database, email, both). Panel members to register for the SAB Internet Discussion Database.
3. Mr. DeMocker to provide a description of REMSAD Versions 6 and 7, including development status, peer review history and description of changes from previous versions. (Due date: June 28, 2001)
4. Mr. DeMocker to provide the DFO with detailed description of energy assumptions for scenarios, so that she can provide them to members before the July meeting. (Due date: July 5)
5. Mr. DeMocker will consult with Agency staff working with NATA benefits regarding the question of whether NATA data could be used to support a "bounding exercise"

estimation of the potential benefits of HAP controls, perhaps with a particular focus on a specific HAP such as benzene, under Title III. (Due date: July 5)

6. Mr. DeMocker to provide maps showing regions being considered for regional-level disaggregation of costs (Due date: July 5)
7. Mr. DeMocker to provide information about costs of Afeeding growth differentials back into the system,@ and also to provide relevant citations about the CGE Model from the retrospective study. (Due date: July 5)

At 3:00 p.m., Dr. Cameron adjourned the meeting.

Respectfully Submitted:

Designated Federal Official

Certified as True:

Chair

NOTE AND DISCLAIMER: The minutes of this public meeting reflect diverse ideas and suggestions offered by the Council members and consultants (M/C) to the Agency during the course of deliberations within the meeting. Such ideas, suggestions and deliberations do not necessarily reflect definitive consensus advice from the Council M/C. The reader is cautioned to not rely on the minutes to represent final, approved, consensus advice and recommendations offered to the Agency. Such advice and recommendations may be found in the final advisories, commentaries, letters, or reports prepared and transmitted to the EPA Administrator following the public meetings.